Lesson 4: Patterns—Linear, Quadratic, and Exponential

Time: Two to three class periods (50 minutes)

Grade-Level Expectations Addressed:

(A1B10) Generalize patterns using explicitly or recursively defined functions.
(A1C10) Compare and contrast various forms of representations of patterns.
(A1D10) Understand and compare the properties of linear, quadratic and exponential functions (include domain and range)
(A1E10) Describe the effects of parameter changes on quadratic and exponential functions.
(G4B10) Draw or use visual models to represent and solve problems.

Essential Questions to Guide the Unit and Focus Teaching and Learning:

1. How do patterns help us represent, analyze, make predictions, and draw and justify conclusions from sets of data?
2. How can we use patterns to communicate mathematical ideas?

Specific Classroom Arrangement/Preparations:

Assigning students to groups is recommended.

Lesson Materials:

Folding paper

Copies of activity sheets for Lesson 4 from Appendix

Lesson Four Assessment and Assessment Solutions

Technology/Manipulatives/Resources:

- Graphing Calculator (TI-83)